



**Wisconsin
Electric**
POWER COMPANY

231 W. Michigan, P.O. Box 2046, Milwaukee, WI 53201

(414) 221-2345

VPNPD-91- 043
NRC-91- 009

January 23, 1991

Document Control Desk
U. S. NUCLEAR REGULATORY COMMISSION
Mail Station P1-137
Washington, DC 20555

Gentlemen:

DOCKET NOS. 50-266 AND 50-301
ADDITIONAL RESPONSE TO BULLETIN 88-08
THERMAL STRESSES IN PIPING CONNECTED TO REACTOR COOLANT SYSTEMS
POINT BEACH NUCLEAR PLANT UNITS 1 AND 2

- References:
- 1) WE letter VPNPD-88-480/NRC-88-089 to NRC dated September 27, 1988
 - 2) WE letter VPNPD-88-616/NRC-88-128 to NRC dated December 21, 1988
 - 3) WE letter VPNPD-89-340/NRC-89-074 to NRC dated June 16, 1989
 - 4) WE letter VPNPD-89-689/NRC-89-169 to NRC dated December 29, 1989
 - 5) WE letter VPNPD-90-313/NRC-90-066 to NRC dated June 29, 1990

Reference 1 identified piping which had the potential to be subjected to stresses from temperature stratification or temperature oscillations which could be induced by leaking isolation or check valves. Wisconsin Electric (WE) evaluated the piping in accordance with the criteria presented in NRC Bulletin 88-08, "Thermal Stresses in Piping Connected to Reactor Coolant Systems." The lines identified were the two-inch diameter auxiliary charging piping and the two-inch diameter auxiliary spray piping for Point Beach Nuclear Plant (PBNP) Units 1 and 2.

Reference 2 provided results of the Unit 2 inspections and described the temperature monitoring equipment installed, data collection system, and preliminary information regarding temperature distributions in these lines.

Reference 3 provided results of inspections and actions taken on these two piping systems during the Unit 1 outage completed in April 1989. Further, the letter documented that WE had removed the

9102070008 910123
PDR ADOCK 05000266
Q PDR

A subsidiary of Wisconsin Energy Corporation

FE16
1/0

auxiliary charging line from the monitoring program and provided a description of our plans and schedules regarding evaluations of the data being collected for the auxiliary spray piping.

Reference 4 identified that inspection of the in-place thermocouples (TCs) on Unit 2 indicated that several TCs were not in contact with the pipe, and therefore the temperature data previously collected may not have been representative of the actual pipe temperatures. The TCs were subsequently replaced with direct clamp-on thermocouples to insure contact with the pipe surface. The letter concluded by stating that WE intended to perform an engineering evaluation of the effects of the recorded thermal stratification on the spray line header piping by June 30, 1990.

Reference 5 described the engineering evaluations performed to assure code compliance due to the unanalyzed condition of thermal stratification in the spray line header piping for PBNP Units 1 and 2, results of the analysis, and resulting actions required to close out the bulletin. The analyses demonstrated code compliance for the spray and auxiliary spray line piping and supports with the exception of small-bore piping support AXS206 on the Unit 2 auxiliary spray line in the regenerative heat exchanger room. The loads causing this support to exceed code allowables were due to the normal design loads generated in the piping reanalysis and were not related to thermal stratification. The support did, however, satisfy the operability criteria established for PBNP. WE committed to modifying this support to bring the design within code compliance during the Fall 1990 Unit 2 refueling outage.

This letter describes the actions performed to assure code compliance for the Unit 2 support (AXS206) that required modification. Evaluation of the support design determined that the as-built support configuration could not be modified without affecting another piping system on the gang support. Therefore, we decided to design a new support to replace AXS206.

During removal of the piping insulation to install the new support design for AXS206, it was discovered that a U-bolt was missing from an adjacent support (AXS207). Evaluation of the existing support showed that, while the structural hardware for support AXS207 was adequate for the design loads, the system could be improved by replacing AXS207 with a new support in a different location. With these changes, the spray and auxiliary spray lines for Unit 2 were reanalyzed for thermal stratification and normal design loading conditions.

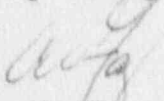
Document Control Desk
January 23, 1991
Page 3

The new support designs were installed during the recently completed fall 1990 refueling outage for PBNP Unit 2. The analysis results demonstrate code compliance for both design basis loadings and thermal stratification effects for piping and supports on the spray and auxiliary spray lines.

WE believes that all necessary actions required by Bulletin 88-08 are now complete for both units at PBNP. However, we will inspect the auxiliary spray line pipe supports in the Unit 1 regenerative heat exchanger room to assure that there are no support hardware problems similar to those experienced in Unit 2. We will advise the NRC if this inspection discloses any significant as-built problems.

Please contact us if you have any questions concerning our actions in this matter.

Very truly yours,


C. W. Fay
Vice President
Nuclear Power

Copy to: NRC Resident Inspector
NRC Regional Administrator, Region III